Physics of the Absurd

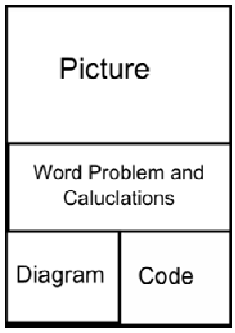
Working in groups of 2 to create weird/crazy situations related to the concept of Projectile Motion.

Project Proposal Form Requirements (due February 16th):

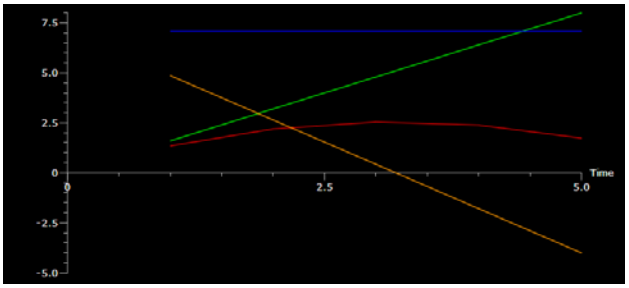
- Picture Sketch:
  - Should have at least one moving object
  - The landscape and scenery
  - The motion effect (who is going to move and how will it look)
  - Anything else, it needs to be fully designed.
- Description:
  - The word problem, explained fully and succinctly.
  - Creativity and absurdity are encouraged.
  - Spelling and grammar are correct.
- Calculations
  - A sketch of the motion that is occurring.
  - The equations involved.
  - Math is solved step by step.
  - All numbers have 3 significant figures.
  - The variables and constants.
  - A table including 5 or more data points for vx, vy, dx, and dy (depending on scenario).
- Graph:
  - On a grid.
  - Vx, Vy, dx, and dy are all graphed as dependent on time.
  - A key clarifies which object is which.

Final Draft:

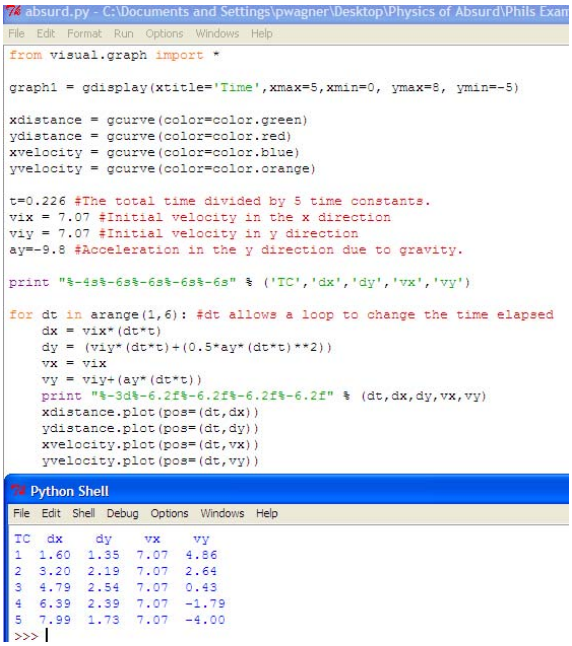
- Picture, Diagram, Description is all combined into a 11"x26" file.
- All is mounted onto a hard backed project board.
- Black border separates each section.
- Names are on the back of the board, large enough to be found.
- Layout can be found in diagram on right
- All rough draft requirements are fulfilled.
- Picture:
  - Picture is in high resolution.
  - The motion effect matches video for realism.
  - Minimum of 5 points of motion.
  - Costumes/Makeup/SFX are used
  - The background fits with the action taking place.
  - Final maximum picture size is 8"x11".



- Graph
  - VPython graph screen shot of vx, vy, dx, and dy.
  - Maximum size of diagram is 5"x5".



- Code
  - Includes comments and explanations
  - Screen shot of code and table of output
  - Utilizes looping and dt.
  - Maximum size of code is 5"x5".
- Calculations
  - Diagram matches the word problem scenario and is mathematically accurate.
  - "Microsoft Word or "Open Office" is used to produce quality formatted equations and math.
  - Font chosen is large enough and clear enough to be read from at least 3 feet away.
- Description
  - Font chosen is large enough and clear enough to be read from at least 3 feet away.
- Maximum size of description and calculations is 8"x11".



Schedule:
February 9 - Introduce Project /Choose Groups and Complete front side of Project Proposal form (due at EOC)
February 10 - Projectile Motion Introduction/Trig Functions (notes check at end of class)
February 11 - Finish Projectile Motion Introduction/Work on Calculations and Graph
February 12 - Work on calculations and graph. Approved Project Proposal Form by end of class.

Schedule date during the week of February 16-19 to take picture. All materials on list must be at HTHCV in order to schedule a date.

February 16 – Humanizing Haiti Exhibition
February 17 – Pro Mo Problems/Nerf Lab
February 18 – Final and formatted Calculations and Description (due at end of class)
February 19 – VPython Code
February 22 – VPython Code checked by end of class
February 23 – Work on Pictures
February 24 – Work on Pictures
February 25 - Free work day (finish whatever needs to be done)
February 26 - Project due by end of class.

All parts of the project are worth 40 points (Picture + Calculations + Graph/Diagram + Code + Description) for a total of 200 points. Extra credit is available for those who exceed the project requirements.